

**CLASS 352, OPTICS: MOTION PICTURES****SECTION I - CLASS DEFINITION**

This class includes structure motion picture cameras, which record motion picture cameras, upon a single actuation a series of individual photographs which are separated in time. Generally the recording rate is related to the persistence of vision when the photograph series is used to accurately portray an action. However, special types of cameras are included which record the picture series at rates differing greatly from the normal persistence of vision time so as to produce a series of pictures of utility other than the creation of a motion illusion or to create a motion illusion with the rate of motion greatly exaggerated.

Included in this class are exhibitors which display motion pictures and the motion picture carriers for use in the exhibitors. The exhibitors may display the motion pictures by either affording the viewer a direct view of the pictures with or without the aid of optical magnifiers, or optically projecting a real image of the pictures on a surface which is visible to the viewers. The exhibitors display the individual pictures of the motion picture series sequentially at such a rate that due to the persistence of vision of the viewer an illusion of motion is created. The individual pictures of the motion picture series may be carried on an opaque or transparent base, which may be in the form of a strip, a disc, a drum or individual plates.

Motion picture cameras and/or projectors with perfecting structure are also included in this class. Examples of this perfecting structure are, sound accompaniment, natural color structure, stereoscopic structure, panoramic structure, special effect producing structure, special optical structure permitting plural fields of view, removable magazines, film rewinding structure, focusing structure, automatically controlled diaphragms, plural lens selectors, film strip fire prevention and isolation structure, loop formers, structure for framing and/or eliminating travel ghosts, special housings, and special supports.

Plural arrangements of motion picture apparatus, and motion picture apparatus which is combined with or convertible to other devices are also provided for in this class. Examples of such apparatus specifically provided for are sound accompanied motion picture apparatus with selectively operable plural records, recorders, or reproducers; motion picture apparatus combined with a manned vehicle; and motion picture cameras which convert to motion picture projectors or still cameras.

Subcombinations of motion picture apparatus not otherwise provided for, such as film gates and motion picture shutters, are included here.

Included also are certain accessories related to motion picture apparatus such as sound stages, prompting devices, attachments and sets for the production of special effects, and film treating and working apparatus.

Methods of recording and exhibiting motion pictures, methods of using motion pictures for other than the creation of a motion illusion for entertainment such as for the analysis of motion, and methods of carrier treating and working are included here.

**SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS****MOTION PICTURE APPARATUS CLASSIFIED ELSEWHERE**

Certain devices which are quasi-motion picture in nature are not classified here. Certain picture exhibitors in which a portion of the picture is made so as to move or to create an illusion of motion but without the sequential presentation of individual pictures are classified in Class 40, Card, Picture, or Sign Exhibiting especially subclasses 427+. Cameras which convert an optical image to an electrical analog for electrical storage (e.g., magnetic tape) and exhibitors which operate from such an analog are classified in Class 348, Television, subclasses 207+ and 739+.

**MOTION PICTURE COMPONENTS AND SUBCOMBINATIONS CLASSIFIED ELSEWHERE**

Intermittent feed mechanism of the type used in motion picture devices are classified in Class 226, Advancing Material of Indeterminate Length, especially subclasses 52+, if they are of general utility. Reeling and unreeling means of the type employed in motion picture devices are classified in Class 242, Winding, Tensioning, or Guiding, subclasses 324+ for a holder (e.g., spool, cartridge) for a motion picture camera; see, too, 67.1+, for winding machines and 68+, for holders and holder-supporters of general utility, respectively.

Stands for motion picture projectors without specific cooperation with the projector are classified in Class 248, Supports, subclass 637. For alarms responsive to breakage of motion picture film see Class 340, Communications: Electrical, subclass 675.

Class 359, Optical: Systems and Elements, provides for lens mounts in motion picture devices where the motion picture device is only nominally set forth.

#### METHODS AND APPARATUS FOR MAKING MOTION PICTURE APPARATUS

In general there is not specific place for the methods and apparatus of manufacturing motion picture apparatus other than the general manufacturing steps for the component parts (e.g., Class 409, Gear Cutting, Milling, or Planing, for the manufacture of gears used in motion picture devices or Class 451, Abrading, subclasses 42+ for the grinding of lens components used in motion picture devices). However, the chemical developing and processing of motion picture film is classified in Class 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof.

#### STILL PICTURE CAMERAS

Photos:graphic cameras which use light to record a single picture for each actuation are classified in Class 396, Photography.

#### STILL PICTURE EXHIBITORS AND PROJECTORS

Devices for exhibiting single photographs are provided for in Class 40, Card, Picture, or Sign Exhibiting, if the picture is viewed directly or with a simple magnifier. Class 353, Optics: Image Projectors, has devices which project a real image on a viewing surface where no positive recitation such as "a motion picture projector" or structure definitive of a motion picture mechanism is set forth in the claims.

#### RADIATION, IMAGERY FILM

Radiation imagery film is classified in Class 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, subclasses 496+.

### SECTION III - REFERENCES TO OTHER CLASSES

#### SEE OR SEARCH CLASS:

- 40, Card, Picture, or Sign Exhibiting, subclasses 446+ for exhibitors which change the displayed picture without motion illusion and subclasses 427+ for displays with the illusion of motion (See MOTION PICTURE APPARATUS CLASSIFIED ELSEWHERE above).

- 74, Machine Element or Mechanism, subclass 436, for Geneva type gearing.
- 226, Advancing Material of Indeterminate Length, for the apparatus and processes of advancing material, including motion picture film, of indeterminate-length.
- 242, Winding, Tensioning, or Guiding, subclasses 324+ for unwinding and rewinding a machine convertible information carrier; e.g., an image bearing carrier.
- 348, Television, subclasses 207.99 through 207.2 and 739-843 for television. See also Motion Picture Apparatus Classified Elsewhere Above.
- 353, Optics: Image Projectors, for an image projector which projects an image with no illusion of motion of the image.
- 355, Photocopying, subclasses 78+ for contact printing apparatus and processes.
- 359, Optical: Systems and Elements, subclasses 642+ for lenses for motion picture cameras.
- 362, Illumination, subclasses 257+, for illuminating projectors.
- 369, Dynamic Information Storage or Retrieval, subclasses 100+ for optical storage or retrieval of an audio signal.
- 396, Photography, for cameras which use light to record a single picture for each actuation.
- 399, Electrophotography, subclasses 9+ for diagnostics, subclasses 38+ for controls, subclasses 130+ for image formation, subclasses 168+ for charging, subclasses 177+ for exposure, subclasses 222+ for development, subclasses 297+ for transfer, subclasses 320+ for fixing, subclasses 343+ for cleaning, and subclasses 361+ for document handling.
- 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, for the chemical aspects of radiation imagery, including post imaging processing and chemically defined radiation imagery compositions and elements.

### SECTION IV - GLOSSARY

#### APERTURE PLATE

A portion of the gate which confines the recorded image to a single frame in a motion picture camera gate or confines the projected light beam to a single frame in a motion picture projector.

**CAMERA, MOTION PICTURE**

A device for photographically recording periodically a series of images of an object upon a single actuation.

**CARRIER, MOTION PICTURE**

The vehicle for the individual pictures of a motion picture series, generally a flexible strip.

**DISSOLVE**

The gradual diminishing of the intensity of an image until it is no longer recognizable.

**FRAME**

The space or area on a motion picture carrier normally occupied by one picture of a motion picture series.

**GATE**

A portion of a motion picture device which positions the motion picture carrier in the plane of focus of the optical system of the motion picture device.

**LOOP**

A slack portion of a motion picture film strip useful to isolate tensionally derived speed variations.

**MOTION PICTURE**

A pictorial representation of objects which change position with time comprising a plurality of pictures in which objects are incrementally displaced in successive pictures corresponding to a displacement in time, the plurality of pictures being displayed sequentially at such a rate that they create, due to the persistence of vision, an illusion of motion to the viewer.

**MOTION PICTURE APPARATUS**

Instruments and machines for use in recording or reproducing motion pictures, and includes cameras, projectors, and carriers.

**MOTION PICTURE SEQUENCE**

A plurality of individual pictures presented at such a rate as to produce a motion picture.

**OPTICAL AXIS**

The path taken by a central ray of a light beam as it passes into the motion picture camera or from the motion picture.

**PROJECTOR, MOTION PICTURE**

A device which forms a real optical image of successive elements of a motion picture sequence at such a rate that an illusion of motion is produced due to the persistence of vision.

**SHUTTER**

An element of a motion picture device which interrupts the light to provide the sequential recording or presentation of the motion picture image.

**TRANSDUCER**

A device which converts one form of energy to another. The term generally used in this class in the recording or reproducing of sound accompaniment and denotes such devices as a magnetic pick up or electro-mechanical phonograph pick up.

**TRAVEL GHOST**

A fault of a motion picture projection caused by presentation of the individual picture in a motion picture sequence before the picture has come to rest. In projector systems this superfluous image is of a lesser light intensity.

**SUBCLASSES**

- 1 This subclass is indented under the class definition. Subject matter including sound recording, carrying, or reproducing structure and methods for recording or reproducing sounds, such as music or speech, which bear a definite relationship to the motion picture sequence.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 85, for motion pictures with special effects and especially subclass 85 for motion pictures with scent accompaniment.

- SEE OR SEARCH CLASS:
- 353, Optics: Image Projectors, subclasses 15+ for a still picture projector with sound accompaniment.
- 360, Dynamic Magnetic Information Storage or Retrieval, subclasses 3 and 80, for magnetic recorders or reproducers combined with nominal motion picture apparatus.
- 369, Dynamic Information Storage or Retrieval, appropriate subclasses for storage or retrieval of an audio signal.
- 2** This subclass is indented under subclass 1. Subject matter in which a group of sequentially arranged pictures are presented at such a rate to give the visual illusion of a motion sequence which reoccurs at regular intervals together with the accompaniment of sound from a sound recording.
- (1) Note. This subject matter includes a series of picture recordings on a phonograph record, which produce a motion illusion upon rotation of the record in playing.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 101, for motion picture devices which have the picture sequence arranged on a drum which is rotated to produce a reoccurring motion picture sequence without sound accompaniment.
- 102, for motion picture devices which have the picture sequence arranged on a disc which is rotated to produce a reoccurring motion picture sequence without sound accompaniment.
- 126, for motion picture devices which have the motion picture sequence arranged on an endless film to produce a reoccurring motion picture sequence without sound accompaniment.
- 3** This subclass is indented under subclass 1. Subject matter including structure providing for performing of action to be photographed with sound accompaniment including scenery and other stage effects.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 88+, for motion picture sets without provision for recording sound.
- SEE OR SEARCH CLASS:
- 472, Amusement Devices, particularly subclasses 57+ for an illusion or stage device appropriate therefor and not of a motion picture type.
- 4** This subclass is indented under subclass 3. Subject matter including means to communicate with performers being photographed without interrupting the sound motion picture photography.
- SEE OR SEARCH CLASS:
- 348, Television, subclass 722 for television studio equipment including teleprompters.
- 5** This subclass is indented under subclass 1. Processes for recording or reproducing motion picture sequences together with recording or reproducing sound bearing a particular relationship to the motion picture sequence.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 38+, for motion picture methods not including steps providing sound accompaniment.
- 6** This subclass is indented under subclass 1. Subject matter which includes a plurality of records, recorders and/or reproducers and means to activate in response to a signal or at the will of an operator, selected ones of these recorders and reproducers or a record selection.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 123, for motion projectors without sound accompaniment which reproduce selected motion picture sequences.
- 7** This subclass is indented under subclass 6. Subject matter in which the means to selectively actuate different reproducers includes interrelated control means for the plurality of reproducers, said control means being so related that actuation of the selected reproduc-

- ers will deactivate (inactivate) nonselected reproducers.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
133, for a plurality of motion picture devices which are sequentially operated without sound accompaniment.
- 8** This subclass is indented under subclass 6. Subject matter in which means are provided to operatively associate a plurality of picture or sound records with a reproducer to establish a reproducing relationship between a selected record and the reproducer.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
123, for motion picture projectors which reproduce without sound accompaniment a motion picture film strip selected from a plurality of such motion picture strips.
- 9** This subclass is indented under subclass 6. Subject matter including a plurality of sound recorders or reproducers used in cooperation with a single picture recorder or reproducer and wherein the selective actuating means actuates one of the sound recorders or reproducers in conjunction with the deactivation of another of the sound recorders or reproducers such that a continuous sound record is either recorded or reproduced to accompany the motion picture.
- 10** This subclass is indented under subclass 6. Subject matter which comprises means to selectively activate one of a plurality of sound transducers or picture recording or reproducing elements of a picture and sound recorder or reproducer.
- 11** This subclass is indented under subclass 1. Subject matter including a plurality of sound transducers which are positioned in a particular relation to the recorded scene or the reproduced picture and wherein a sound record for each transducer is recorded or reproduced corresponding to the sounds from that position in the original scene.
- (1) Note. This subclass provides for motion picture with stereo sound.
- 12** This subclass is indented under subclass 1. Subject matter including means to maintain a timed relationship between the sound and picture recording or reproducing.
- 13** This subclass is indented under subclass 12. Subject matter in which the timing means includes a manually manipulatable control, controlling the relationship between the picture and the sound.
- 14** This subclass is indented under subclass 12. Subject matter in which dimensions of a loop in either the picture carrier or sound carrier are employed to control speed regulation means to maintain the desired time relationship between picture and sound carriers.
- 15** This subclass is indented under subclass 12. Subject matter in which the sound recorder or reproducer controls the picture recorder or reproducer to maintain the proper time relationship between the picture and sound either by means of direct coupling or by employing a control signal originating in sound recorder or reproducer means.
- 16** This subclass is indented under subclass 15. Subject matter which comprises a control means actuated by the sound record to produce a signal which controls the time rate of operation of the picture.
- (1) Note. The subject matter in this generic subclass includes, for example, systems which the control is by a physical configuration of the sound record such as notches or speed change of the sound record as opposed to control by a recorded signal as in the indented subclass 17.
- 17** This subclass is indented under subclass 16. Subject matter in which the control is effected by a signal or signal generating element carried by the sound record.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
16, see (1) Note under the generic subclass 16 for detailed distinction between subclass 16 and this subclass (17).

- 92, for motion picture devices employing film carried control signals without sound accompaniment.
- 236, for carriers with film carried indicia.
- 18** This subclass is indented under subclass 15. Subject matter in which the control is effected by the position of a normally moving sound transducer in a separate sound recorder or reproducer.
- 19** This subclass is indented under subclass 12. Subject matter in which the picture recorder or reproducer controls the sound recorder or reproducer to maintain the proper time relationship between the picture and sound.
- 20** This subclass is indented under subclass 19. Subject matter in which the sound recorder or reproducer is controlled from a signal or signal generating element carried by the picture record.
- 21** This subclass is indented under subclass 12. Subject matter in which the desired time relationship between the operation of the picture recorder or reproducer and the sound reproducer is obtained by regulation of the speed of operation of the units independently of each other.
- (1) Note. This subclass may include common or separate picture and sound carriers.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 15+, for motion picture apparatus where the sound controls the picture.
- 19+, for motion picture apparatus where the picture controls the sound.
- 180+, for camera and/or projection drive mechanism with speed regulation or selection.
- 22** This subclass is indented under subclass 12. Subject matter in which provisions are made for starting the picture recorder or reproducer and the sound recorder or reproducer in a predetermined timed relationship.
- 23** This subclass is indented under subclass 12. Subject matter in which there is provision for indicating the time relationship between the sound and picture recording or reproducing means.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 170+, for camera and/or projector drive mechanisms with indicating means.
- 24** This subclass is indented under subclass 23. Subject matter in which the indication is by means of signals or marks on the sound and picture record carriers.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 236, for picture carrier with film carried indicia.
- 25** This subclass is indented under subclass 1. Subject matter including control means for initiating, controlling or terminating the operation of picture and sound recorders or reproducers.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 174+, for camera and/or projector drive mechanisms with starting and/or stopping means.
- 26** This subclass is indented under subclass 1. Subject matter in which the sound and picture records are located on a common carrier.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 31, for motion picture systems where the sound and picture are recorded on separate carriers.
- 240, for picture carrier with a particular format.
- 27** This subclass is indented under subclass 26. Subject matter in which the common carrier is a flexible strip.
- 28** This subclass is indented under subclass 27. Subject matter in which a single illumination source is employed to reproduce both the picture and sound records.
- 29** This subclass is indented under subclass 27. Subject matter in which the picture gate and sound transducer are spaced along the strip whereby the strip passes through a picture

- recording or reproducing station and a sound transducer station at separate times.
- 30** This subclass is indented under subclass 29. Subject matter which comprises means to reduce variations in the speed of strip movement.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
180, for camera and/or projector drive mechanisms with speed regulation or selection.
- 31** This subclass is indented under subclass 1. Subject matter in which the picture record and the sound record are on separate carriers.
- 32** This subclass is indented under subclass 31. Subject matter in which the picture carrier is a flexible strip and the sound carrier is a disc or cylinder with the recorded sound being recorded in grooves in the disc or cylinder.
- 33** This subclass is indented under subclass 32. Subject matter having an interconnecting drive between the picture recorder or reproducer and the sound recorded or reproducer constructed so as to permit the two units to be relatively adjustable.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
12, for motion picture systems with picture and sound synchronizing.
- 34** This subclass is indented under subclass 1. Subject matter including structure which supports and/or substantially encloses sound motion picture apparatus and cooperates with significant portions of this apparatus.
- (1) Note. See the search notes below for housings and supports classified elsewhere.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
242, for motion picture apparatus generally with housings.  
243, for motion picture apparatus generally with supports.
- 35** This subclass is indented under subclass 34. Subject matter in which mechanical means are provided to prevent the apparatus from recording or reproducing any undesired sound.
- SEE OR SEARCH CLASS:  
181, Acoustics, subclass 200 for mufflers and sound filters.
- 36** This subclass is indented under subclass 1. Subject matter in which a particular special relationship exists between the picture and sound reproducer and a viewing screen.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
11, for a system with a plurality of sound transducers located at predetermined positions with respect to the screen to allocate the sound to a particular portion of the reproduced motion picture.
- SEE OR SEARCH CLASS:  
359, Optical: Systems and Elements, subclass 444 for projection screens with a sound producer and subclass 445 for acoustical screens.
- 37** This subclass is indented under subclass 1. Record carriers particularly adapted by reason of construction or specific arrangement of individual records for recording or reproducing pictures and related sound.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
232+, for motion picture carriers without provision for carrying sound record.
- 38** This subclass is indented under the class definition. Subject matter including process steps for use in the production or application of motion pictures.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
5, for motion picture methods employing sound accompaniment.

- SEE OR SEARCH CLASS:  
 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, subclass 162 for chemically defined radiation imagery product having a sound record.
- 39** This subclass is indented under subclass 38. Subject matter including steps which utilize a motion picture sequence for purposes other than the creation of an illusion of motion such as for example the use of motion pictures to synchronize an orchestra with a second motion picture or as a motion analysis instrument.
- 40** This subclass is indented under subclass 38. Subject matter including steps of reproducing the recorded motion picture sequence to recreate the illusion of motion.
- (1) Note. Methods reciting both recording and exhibiting of motion picture sequences are classified herein and in the indented subclasses and are crossed into subclass 44 below if the recording steps are more than nominally recited.
- 41** This subclass is indented under subclass 40. Subject matter including steps to regulate or otherwise control the illumination of the motion picture illumination system.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 167, for camera and/or projector drive mechanisms with illumination control responsive to drive speed.
- 42** This subclass is indented under subclass 41. Subject matter wherein the regulation and control steps comprise a color filtration of the projector light source.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 66+, for apparatus for filtering projector light sources to render natural color effects.  
 213, for projector shutters with color filter blades.
- 43** This subclass is indented under subclass 40. Subject matter including steps for contributing to imparting an illusion of three dimensional viewing.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 57+, for stereoscopic motion picture cameras and projectors.  
 86, for motion picture depth illusion apparatus.
- 44** This subclass is indented under subclass 38. Subject matter including the steps of recording, usually on a photosensitive surface the plurality of images comprising a motion picture sequence.
- (1) Note. For those processes which recite both the steps of recording and reproducing of a motion picture sequence see subclasses 40+ above.
- 45** This subclass is indented under subclass 44. Subject matter including the filtering of the image bearing light before reaching the photo sensitive recording surface.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 42, for methods of controlling the projector involving color filtration.
- 46** This subclass is indented under subclass 44. Subject matter including exposing a single motion picture carrier a plurality of times for each frame of the motion picture sequence.
- 47** This subclass is indented under subclass 44. Subject matter including recording a projected image with the subject such that each scene of the motion picture sequence contains the recorded projected image as well as the image of the subject.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 89, for sets with projected picture components.
- 48** This subclass is indented under subclass 44. Subject matter including steps affecting the subject or recorded image to produce a motion

- picture sequence which does not correspond in all details to the actual action sequence being recorded or reproduced.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
85+, for motion picture special effect structure.
- 49** This subclass is indented under subclass 48. Subject matter including the step of illuminating the subject being photographed in a controlled manner to produce a desired motion picture effect.
- 50** This subclass is indented under subclass 48. Subject matter in which a series of drawings illustrating an object in different altitudes of motion are photographed to provide an illusion of a motion sequence.
- 51** This subclass is indented under subclass 50. Subject matter in which the drawing series is made using photographs or photos:graphic images as guides.
- 52** This subclass is indented under subclass 50. Subject matter in which a drawing is moved or manipulated to provide for more than a single representation of an attitude of motion.
- 53** This subclass is indented under subclass 48. Subject matter in which the camera is moved during the recording of the motion picture sequence.
- 54** This subclass is indented under subclass 48. Subject matter in which a puppet is moved to simulate various attitudes of movement of an animated object or person, each position or attitude of movement being recorded as an element of movement of a motion picture sequence.
- 55** This subclass is indented under subclass 44. Subject matter including the steps of supplying printed titles to accompany the motion picture sequence.
- 56** This subclass is indented under subclass 38. Subject matter including processes for treating the recorded picture or for performing nonphotos:graphic work or the carrier such that the carrier is altered.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
130, for apparatus which performs some work on or otherwise treats the film in addition to recording or reproducing this motion picture sequence.
- 57** This subclass is indented under the class definition. Subject matter in which the picture sequence includes pairs of individual picture elements having separate perspectives corresponding to the perspective offered by the right and left eyes of the viewer.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
86, for devices creating an illusion of three dimensional viewing without employing separate left-right images.  
129, for stereoscopic viewing apparatus with the illusion of motion.
- SEE OR SEARCH CLASS:  
348, Television, subclasses 42+ for stereoscopic television systems.  
353, Optics: Image Projectors, subclasses 6 and 7 for stereoscopic still picture projectors.  
359, Optical: Systems and Elements, subclasses 462+ for stereoscopes and stereoscopic systems.  
396, Photography, subclasses 324+ for stereoscopic still cameras of the class type.
- 58** This subclass is indented under subclass 57. Subject matter in which the right eye perspective image and the left eye perspective image are recorded upon and reproduced from a common picture frame.
- (1) Note. The systems classified herein employ images which are broken into small incremental areas and coextensively fill the same frame area. Systems which record the complete images in smaller frames so that they are placed in a standard frame are classified according to other features of the system.
- 59** This subclass is indented under subclass 57. Subject matter in which the right eye perspective is recorded on or reproduced from a film

- strip different from the associated left eye perspective.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
60+, for the simultaneous recording or reproducing of left-right images in stereoscopic motion picture equipment.
- 60** This subclass is indented under subclass 57. Subject matter in which the right and left eye images are recorded or reproduced simultaneously.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
59, for stereoscopic motion picture equipment wherein the right and left perspectives are recorded on or reproduced from separate film strips.
- 61** This subclass is indented under subclass 60. Subject matter in which the left and right perspective images are channeled to the proper eye of the viewer by virtue of the physical or optical properties of the projection screen.
- SEE OR SEARCH CLASS:  
359, Optical: Systems and Elements, subclasses 443+ for projection screens generally.
- 62** This subclass is indented under subclass 57. Subject matter including means to record or reproduce the individual left-right picture elements alternately in a sequence.
- 63** This subclass is indented under subclass 62. Subject matter in which a viewing device driven in synchronism with the projector limits the vision of the viewer to the appropriate image by permitting by permitting passage of light to each eye alternately.
- SEE OR SEARCH CLASS:  
359, Optical: Systems and Elements, subclasses 462+ for stereoscopic systems.
- 64** This subclass is indented under subclass 62. Subject matter in which the film strip guide means moves the film strip to cooperate with the objectives imaging the left and right perspectives alternately.
- 65** This subclass is indented under subclass 62. Subject matter including a reflecting system mounted in front of the objective lens of the device which establishes the left-right perspective of the device.
- 66** This subclass is indented under the class definition. Subject matter including means for recording a plurality of image sets on a photos:graphic film of a monochromatic base, or reproducing such image sets, the individual pictures of each set representing an intensity image of the scene photographed corresponding to a particular color which is different from the color of the other images of the set.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
213, for color shutters with light modifying blades.  
234, for strip type color picture carriers.
- SEE OR SEARCH CLASS:  
353, Optics: Image Projectors, subclass 31 for multicolor still picture projectors.  
396, Photography, subclasses 305+ for color still cameras utilizing monochrome film.  
430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, appropriate subclasses for natural color process, composition, and product.
- 67** This subclass is indented under subclass 66. Subject matter wherein individual filtered light images are simultaneously recorded or reproduced.
- 68** This subclass is indented under the class definition. Subject matter in which one picture of the motion picture sequence is recorded or reproduced during the change period of the preceding picture so as to effect alternate projection from separate carriers or separate areas of a common carrier.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
133+, for alternate projection of motion picture film strips from separate projectors.

**69** This subclass is indented under the class definition. Subject matter including means for recording or reproducing a single motion picture sequence from a plurality of angularly separated view points such that the individual pictures cooperate to produce the illusion of a continuous picture of greater angular extent than any of the constituent pictures.

- (1) Note. This subclass is limited to those devices which employ angular scanning or plural optical systems to cover the field of view. For extreme wide angle lenses see Class 359, Optical: Systems and Elements, subclasses 642+, particularly subclasses 668+ for anamorphic lenses. Motion picture devices which are useable with this type lens in addition to normal optics are classified in this class, subclass 79.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 57+, for stereoscopic motion picture cameras and projectors.  
86, for depth illusion effects in motion picture.

SEE OR SEARCH CLASS:

- 396, Photography, subclasses 20+ for panoramic cameras.

**70** This subclass is indented under subclass 69. Subject matter including means to record or reproduce the motion picture sequence as a plurality of simultaneously recorded or reproduced picture frames containing contiguous segments of the picture scene.

**71** This subclass is indented under subclass 70. Subject matter in which means are provided to control the illumination at the edges of the individual picture frames to effect a projected motion picture sequence, which frames are projected slightly overlapped such that the combined picture is of uniform light intensity.

**72** This subclass is indented under the class definition. Subject matter in which the motion device employs a film strip housed in a removable enclosure containing both a supply and a take-up spool such that the entire enclosure

including the spool is removable and insertable as a unit.

- (1) Note. To be classified herein a patent must have significant motion picture structure as the cooperation of two photographic elements such as a lens and a gate, or the details of one such element such as a gate. Patents which merely recite such an element broadly as a part of a magazine combination are classified in Class 242, Winding, Tensioning, or Guiding. If only the construction details of the magazine are recited the patent is classified in Class 220.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 242, for motion picture structure with housings generally.

SEE OR SEARCH CLASS:

- 242, Winding, Tensioning, or Guiding, subclasses 326+ and 335+ for a coil of machine convertible information bearing carrier mounted in a magazine, termed a "cartridge" in Class 242.  
396, Photography, appropriate subclasses for cameras using roll film in a removable magazine.

**73** This subclass is indented under subclass 72. Subject matter in which the motion picture device may selectively employ spooled film not contained in an enclosure.

**74** This subclass is indented under subclass 72. Subject matter including structure to disengage or eject the magazine from the remaining motion picture apparatus.

**75** This subclass is indented under subclass 72. Subject matter including means to close the film strip enclosure to light during removal and insertion of the film enclosure unit.

**76** This subclass is indented under subclass 75. Subject matter wherein the light closure includes separate structure to close the normally open light admitting apertures.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
204+, for motion picture shutters generally.
- 77** This subclass is indented under subclass 72. Subject matter including means to permit the accurate indexing of the film gate in the focal plane of the motion picture device.
- 78** This subclass is indented under subclass 72. Subject matter including details of the film strip enclosure.
- (1) Note. For classification here the magazine must be claimed with other motion picture details. See the search notes below for magazines, per se.
- SEE OR SEARCH CLASS:  
220, Receptacles, especially subclasses 4.01+ and 352+ for details of construction of the enclosure for film strip spooling means.  
242, Winding, Tensioning, or Guiding, subclasses 326.2+, 341+, and 348+ for particular magazine construction, termed a cartridge in Class 242.
- 79** This subclass is indented under the class definition. Subject matter including means to permit the recording or reproduction of picture carriers or frames having different physical dimensions.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
226, for film gates with removable or interchangeable aperture plates.
- 80** This subclass is indented under subclass 79. Subject matter including means to permit the use of a plurality of film strips having different edge to edge dimensions.
- 81** This subclass is indented under the class definition. Subject matter in which the time sequence pictures are physically located together in a common frame and are optically separated to form the successive motion picture presentations.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
58, for composite stereoscopic cameras and/or projectors.  
67, for color cameras and/or projectors using monochrome film.
- SEE OR SEARCH CLASS:  
40, Card, Picture, or Sign Exhibiting, subclass 454 for changing exhibitor with lenticular lens, and subclasses 427+ for a special effect created in a like manner.
- 82** This subclass is indented under the class definition. Subject matter in which the individual pictures of the motion picture sequence are arranged in rows which extend transversely across a film strip picture carrier.
- 83** This subclass is indented under the class definition. Subject matter in which the film strip picture carrier has the individual elements of the motion picture sequence arranged in sequence in a plurality of longitudinal columns.
- 84** This subclass is indented under the class definition. Subject matter including means to record a motion picture sequence at a time rate substantially different from the normal range of such recording rates such that the motion may be reproduced in an altered time relationship by reproducing the sequence at a normal projection rate.
- (1) Note. As an indication of the order of magnitudes time compression recording at framing rates less than 1 frame per second, may be termed time lapse cinematography; while time expansion recording at framing rates in excess of 100 frames per second, may be termed high speed cinematography.
- 85** This subclass is indented under the class definition. Subject matter including means auxiliary to the motion picture camera or projector to record or reproduce an illusionary effect other than motion, such as special camera motion, the illusion of surroundings other than of the filming local, or special accompaniment such as scent.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 1+, for special motion picture effects with sound accompaniment.  
 5, and 38+, for methods of producing special effects.  
 57+, for stereoscopic cameras and/or projectors.  
 66+, for color camera and/or projectors using monochrome film.  
 69+, for panoramic type motion pictures.  
 217, for dissolve shutters, per se.
- SEE OR SEARCH CLASS:  
 359, Optical: Systems and Elements, for miscellaneous optical elements and systems.  
 472, Amusement Devices, particularly subclasses 57+ for an illusion or stage device appropriate therefor and not of a motion picture type.
- 86** This subclass is indented under subclass 85. Subject matter providing an illusion of relief from a single motion picture sequence.
- (1) Note. The devices herein classified produce an illusion of relief from a picture of a single perspective.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 57+, for motion picture devices employing frames taken from two perspectives corresponding to the right and left eye view of the observer, i.e., stereoscopic devices.
- 87** This subclass is indented under subclass 85. Subject matter for creating an illusion of motion of inanimate objects by facilitating the successive photographing of the objects in various positions representing phases of the illusionary motion.
- 88** This subclass is indented under subclass 85. Subject matter including means to simulate a local other than the photographing location or to provide for additional scenery in the actual local.
- SEE OR SEARCH CLASS:  
 52, Static Structures (e.g., Buildings), subclasses 6+ for a building with a theater stage.  
 396, Photography, subclasses 1+ for non-motion picture photography studios.  
 472, Amusement Devices, particularly subclasses 75+ for a stage apparatus or setting appropriate therefor and not of a motion picture type.
- 89** This subclass is indented under subclass 88. Subject matter in which a portion of the set is an optically projected picture.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 47, for recording motion picture methods involving a projected picture component.
- SEE OR SEARCH CLASS:  
 353, Optics: Image Projectors, subclasses 28, 29 and 30 for related still picture projectors.  
 359, Optical: Systems and Elements, subclasses 443+ for projection screens.
- 90** This subclass is indented under subclass 85. Subject matter including means to provide the motion picture sequence with indicia to accompany the motion picture sequence such as explanatory text.
- 91** This subclass is indented under subclass 85. Subject matter including means to change from one motion sequence to another with a blending of picture material of the two sequences.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 217, for shutters which progressively alter the exposure to produce dissolves.
- 92** This subclass is indented under the class definition. Subject matter employing a motion picture film strip with control signals in addition to the individual pictures which are sensed or recorded to control, or in response to, the operation of the motion picture device or other associated device.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
236, for motion picture carriers with film carried indicia.
- 93** This subclass is indented under the class definition. Subject matter in which a motion picture camera combines a plurality of fields of view, separated by areas which are not photographed, into plural motion picture sequences on common frames.
- SEE OR SEARCH CLASS:  
346, Recorders, subclasses 107.1+ for phenomenal optical recorders with plural fields of view.  
347, Incremental Printing of Symbolic Information, subclasses 224+ for radiation marking.  
396, Photography, subclasses 322+ for plural image recording for nonmotion picture cameras which may have plural fields of view.
- 94** This subclass is indented under the class definition. Subject matter including an auxiliary optical device to cause light from outside the normal field of view of the lens to be focused upon the picture carrier.
- 95** This subclass is indented under the class definition. Subject matter shaped in the form of a firearm usually for the purpose of determining manipulation of the simulated firearm by inspection of the motion pictures produced.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
243, for motion picture devices supported on firearms.
- SEE OR SEARCH CLASS:  
42, Firearms, subclass 1.01, for dummy firearms.
- 96** This subclass is indented under the class definition. Subject matter for exhibiting motion picture sequences stored on an opaque motion picture carrier by means of optically projecting the motion picture sequence.
- (1) Note. Generally, motion picture film is opaque at the time of exposure but is processed to a transparent base with pictures in varying degrees of opacity or translucency. The projectors classified here are especially equipped to project motion picture sequences from carriers which are completely opaque with the pictures formed with varying degrees of reflectivity.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
232, for opaque motion picture carriers.
- SEE OR SEARCH CLASS:  
353, Optics: Image Projectors, subclasses 63 and 65 for still picture opaque projectors.
- 97** This subclass is indented under the class definition. Subject matter in which a plurality of film strips are fed through this camera or projector gate in a face-to-face or back-to-face relationship.
- SEE OR SEARCH CLASS:  
353, Optics: Image Projectors, subclass 35 for a still picture projector with superimposed film strips.
- 98** This subclass is indented under the class definition. Subject matter including means to record or reproduce a motion picture sequence upon separate plates such that each picture element or groups of picture elements are recorded on or reproduced from separate carriers.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
232+, for motion picture carriers generally.
- SEE OR SEARCH CLASS:  
353, Optics: Image Projectors, subclass 103 for a still picture projector having means to move individual slides.  
396, Photography, subclasses 360+ for still cameras which employ photography on successively changed photographic plates contained in a magazine.
- 99** This subclass is indented under subclass 98. Subject matter in which the picture carrier plates are attached together or to a common support by one edge and are successively brought into recording or viewing position by

- successively angularly indexing the individual carriers, as turning the leaves of a book.
- (1) Note. The successive action is generally accomplished by bringing a rigid stop against the carrier edge opposite the mounting edge and forcing the stop and carriers past one another the natural resiliency of the carrier or the mounting providing for the successive indexing of the carriers as they are freed from the stop.
- 100** This subclass is indented under subclass 98. Subject matter in which the individual pictures are placed along the path of travel of the observer and are successively presented to view of the observer as he proceeds along the path of travel.
- SEE OR SEARCH CLASS:  
40, Card, Picture, or Sign Exhibiting, subclasses 584+ for individual display devices placed along a traveled path.
- 101** This subclass is indented under the class definition. Subject matter in which the individual picture elements are carried on a drum and are successively brought into recording or viewing position by manipulation of the drum.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
2, for motion pictures with sound accompaniment which are drum carried and repeat the motion picture sequence cyclically.
- 102** This subclass is indented under the class definition. Subject matter in which the individual picture elements are carried on a disc carrier which are angularly indexed to record or reproduce the motion picture sequence.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
2, for motion pictures with sound accompaniment which are disc carried and which repeat the motion picture sequence cyclically.
- 103** This subclass is indented under subclass 102. Subject matter in which the pictures are arranged around the rotation axis of the place
- or disc and the pictures are spaced from the axis along either an increasing or decreasing radius such that each picture is at a different distance from the center than the preceding picture.
- 104** This subclass is indented under the class definition. Subject matter in which the motion picture projection apparatus is structurally combined with the cooperating projection surface and means to exclude the light from the projection path.
- SEE OR SEARCH CLASS:  
353, Optics: Image Projectors, subclasses 18, 67, and 74 for cabinet type still picture projectors.  
359, Optical: Systems and Elements, subclasses 443+ for projection screens.
- 105** This subclass is indented under the class definition. Subject matter including a continuously moving carrier and optical means to produce a periodic displacement of the optical axis of the motion picture camera or projector at a rate which corresponds to the carrier movement such that intermittent pictures are recorded on or projected from the continuously moving carrier.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
166, for camera and/or projector drive mechanisms for continuous film movement.
- 106** This subclass is indented under subclass 105. Subject matter in which the optical means includes both moving reflectors and refractors.
- 107** This subclass is indented under subclass 105. Subject matter in which the optical means includes a rotating disc of individual reflectors at different angles to the axis of rotation, or includes a single reflecting surface which has a varying angle of inclination to the rotational axis of the disc.
- 108** This subclass is indented under subclass 105. Subject matter in which the optical means includes a plurality of reflectors rotating about a fixed axis parallel to the reflectors' surfaces.

- 109** This subclass is indented under subclass 105. Subject matter in which the optical means includes a reflector which is angularly displaced about a fixed axis which is parallel to the surface of the reflector.
- 110** This subclass is indented under subclass 105. Subject matter in which the optical means includes reflector means which follows the path of the continuously moving picture carrier for a portion of the carrier's travel.
- 111** This subclass is indented under subclass 110. Subject matter in which the reflecting means includes a plurality of individual reflectors.
- 112** This subclass is indented under subclass 111. Subject matter in which the individual reflectors are angularly adjusted as they track the film strip.
- 113** This subclass is indented under subclass 105. Subject matter in which the optical means includes a refracting means which is cyclically moved to compensate for the relative film and image movement.
- 114** This subclass is indented under subclass 113. Subject matter in which the refracting means includes a plurality of sequentially operable lenses for recording or projecting the motion picture sequence.
- 115** This subclass is indented under subclass 114. Subject matter in which the plural lenses are carried on a rotary carrier.
- 116** This subclass is indented under subclass 113. Subject matter in which the refracting means includes a plurality of refractor elements which are mounted on a rotary carrier, the elements sequentially cooperating with a fixed refractor to form a complete lens system for recording or projecting the image.
- 117** This subclass is indented under subclass 116. Subject matter in wherein the plural refractor elements comprise a group of lens elements carried on a rotary drum so that the optical axes of the lens elements intersect the rotational axis of the drum.
- 118** This subclass is indented under subclass 116. Subject matter wherein the plural refractor elements comprise a group of lens elements carried on a rotary disc such that the optical axis of the lens elements is parallel to the axis of rotation of the disc.
- 119** This subclass is indented under subclass 113. Subject matter in which the refracting means includes a rotating prism with plane parallel optical faces.
- 120** This subclass is indented under subclass 119. Subject matter in which the plano-parallel prism has but two faces.
- 121** This subclass is indented under the class definition. Subject matter including means for recording a plurality of exposures at other than a motion picture rate upon a single actuation of the camera.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 84, for motion picture cameras with time compression or expansion.  
 175, for motion picture camera drives taking a motion picture sequence of predetermined duration in response to a single actuation.
- 122** This subclass is indented under subclass 121. Subject matter including means to sever or perforate the film strip at the conclusion of the series of photographs.
- SEE OR SEARCH CLASS:  
 83, Cutting, for cutting devices and processes generally.
- 123** This subclass is indented under the class definition. Subject matter including means for exhibiting a motion picture film strip selected from a plurality of film strips stored therein.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 6, for motion picture devices which select one of a plurality of sound accompanied motion picture records.

**124** This subclass is indented under the class definition. Subject matter including means to reverse the direction of film strip feed such that the film strip is returned to its initial spooled condition subsequent to recording or reproducing a motion picture sequence.

- (1) Note. Rewinding generally takes place with the other parts of the motion picture device inoperative except as provided for in the search this class, subclass note below, and is generally a continuous film motion rather than an intermittent motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 125, for subject matter in which the rewinding is performed simultaneously with the projection of another film strip.  
173, for intermittent film drives which drive the film in two directions.

SEE OR SEARCH CLASS:

- 226, Advancing Material of Indeterminate Length, subclass 49 for selectively reversible material feed generally.  
242, Winding, Tensioning, or Guiding, subclasses 324+, particularly subclasses 325.3 and 333+.

**125** This subclass is indented under subclass 124. Subject matter in which the rewinding is performed simultaneously with the projection of another film strip.

**126** This subclass is indented under the class definition. Subject matter employing a film strip picture carrier which is joined end-to-end to form a continuous loop.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 2, for motion pictures with sound accompaniment which are carried on an endless carrier and repeats the motion picture sequence cyclically.

**127** This subclass is indented under subclass 126. Subject matter in which the film strip loop is supported on a plurality of guides to provide a film path with a plurality of adjacent loops.

**128** This subclass is indented under subclass 126. Subject matter in which the continuous film strip loop is wound into a single coil such that the film strip is wound on the outside of the coil as film is played out from the center or vice-versa.

SEE OR SEARCH CLASS:

- 242, Winding, Tensioning, or Guiding, subclasses 325+ for means to repeatedly utilize an endless strip without rewinding, subclasses 328+ for means for avoiding rewinding by unwinding from the center of a supply coil, and subclasses 329+ for means for unwinding into the inner convolution of a take-up coil.

**129** This subclass is indented under the class definition. Subject matter in which the pictures of the motion picture sequence are on a film strip, and viewed as motion pictures directly or with a simple magnifier.

- (1) Note. The viewers here classified permit the picture sequence to be viewed with the illusion of motion. In some the film may be stopped and the individual frames examined. The class referenced in the Search Class Note below provides for film viewers without the illusion of motion. This subclass also provides for stereoscopic viewers with the illusion of motion.

SEE OR SEARCH CLASS:

- 40, Card, Picture, or Sign Exhibiting, subclass 361 for film strip viewers of nonmotion picture film strips. See (1) Note above.  
359, Optical: Systems and Elements, subclasses 462+, for stereoscopic systems and viewers in general.

**130** This subclass is indented under the class definition. Subject matter including means for treating, processing, or performing a nonmotion picture type work upon the motion picture carrier during the recording or reproduction of the motion picture sequence on or from the carrier.

- (1) Note. To be classified herein the additional treatment or work performed on

the picture carrier must alter the carrier or a characteristic thereof as for example cleaning, lubricating, or perforating the carrier.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclass 100 for motion picture film cleaning devices.
- 83, Cutting, all subclasses for cutting and punching of film stock.
- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclass 157 for methods of motion picture film splicing, and subclasses 507+, for apparatus for splicing motion picture films.
- 312, Supports: Cabinet Structure, subclass 31 for film reel containers with humidifying or vapor treatment of motion picture film.
- 361, Electricity: Electrical Systems and Devices, subclasses 212+ for devices to remove static charges from motion picture film.
- 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, subclasses 625+ for chemical processing motion picture film.

- 131** This subclass is indented under the class definition. Subject matter wherein the motion picture device is combined with other devices or structures having an added purpose or independent utility other than to perfect the motion picture device.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 133, for combined motion picture cameras and projectors.
- 243, for motion picture devices combined with supports.

SEE OR SEARCH CLASS:

- 348, Television, subclasses 97+ for television combined with motion picture cameras.

- 132** This subclass is indented under subclass 131. Subject matter in which the motion picture device is combined with a mobile carrier to transport persons as well as the motion picture equipment.

- (1) Note. To be termed a vehicle for purposes of classification herein the structure must accommodate a person as well as the motion picture apparatus. Thus a camera riding dolly is classified here while mere camera dollies are classified in subclass 243 below.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 243, for mobile camera supports for the camera alone. (See (1) Note above).

- 133** This subclass is indented under the class definition. Subject matter including two or more motion picture cameras or projectors or one or more motion picture cameras and one or more motion picture projectors which cooperate one with the other to produce a single motion picture sequence or presentation.

- (1) Note. The motion picture devices may operate either sequentially or simultaneously to produce a single sequence.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 7, for sound accompanied motion picture devices which are sequentially operated.
- 136+, for convertible motion picture equipment.
- 201, for plural projectors one of which projects a picture sequence and the other illuminates the screen during the change cycle of the picture projector.

SEE OR SEARCH CLASS:

- 307, Electrical Transmission or Interconnection Systems, subclasses 112+ for switching systems to control the transmission of electrical power to plural projectors.
- 318, Electricity: Motive Power Systems, subclass 102 for the sequential control of electric projection motors.

- 134** This subclass is indented under subclass 133. Subject matter including plural projectors which share a common illumination source.

**135** This subclass is indented under subclass 133. Subject matter including plural projectors whose shutter mechanisms are synchronized to alternately project motion picture frames from each of the projectors.

**136** This subclass is indented under the class definition. Subject matter which selectively performs two dissimilar functions by appropriate rearrangement of parts or use of special adaptor structure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

131+, for motion picture apparatus combined with a diverse type device.

133, for plural motion picture cameras or plural motion picture projectors, or combined motion picture cameras and projectors.

**137** This subclass is indented under subclass 136. Subject matter including structure to permit the camera to record a single picture or upon conversion a motion picture sequence.

(1) Note. The cameras classified here require a rearrangement of parts or some structural alteration for the conversion from still to motion picture.

SEE OR SEARCH THIS CLASS, SUBCLASS:

169, for motion picture cameras which selectively record a single frame or a motion picture sequence.

**138** This subclass is indented under subclass 136. Subject matter in which the device performs the function of a camera recording motion pictures or a projector projecting real images of a motion picture sequence depending on a selected arrangement of parts.

**139** This subclass is indented under the class definition. Subject matter in which the lens or film gate is moved to a position remote from its normal operative position to facilitate the focusing of the lens.

SEE OR SEARCH CLASS:

359, Optical: Systems and Elements, subclasses 380, 410 and 425+ for focusing systems for compound lens systems such as microscopes and telescopes, subclass 506 for focusing mechanisms and subclasses 823+ for axial adjustment of a single lens or lens system.

**140** This subclass is indented under the class definition. Subject matter including means to adjust the relative displacement between the film gate and the lens to produce the desired degree of sharpness in the image.

SEE OR SEARCH CLASS:

359, Optical: Systems and Elements, subclasses 380, 410 and 425+ for focusing systems for compound lens systems such as microscopes and telescopes, subclass 506 for focusing mechanisms and subclasses 823+ for axial adjustment of a single lens or lens systems.

**141** This subclass is indented under the class definition. Subject matter including means to set the diaphragm in accordance with the prevailing light conditions to produce the desired degree of exposure.

SEE OR SEARCH CLASS:

250, Radiant Energy, subclass 229, for diaphragms and adjusting mechanisms in combination with photoelectric detecting devices.

396, Photography, subclasses 213+ for photographic diaphragms controlled by a photocell.

**142** This subclass is indented under the class definition. Subject matter wherein one of a plurality of lenses may be selectively placed in operative relationship with the remaining motion picture mechanism.

SEE OR SEARCH CLASS:

396, Photography, subclasses 73+ for objective focal length control by moving lenses in or out of the light path.

- 143** This subclass is indented under the class definition. Subject matter including means to prevent combustion of the motion picture film or to limit the combustion to a small portion of the film strip.
- SEE OR SEARCH CLASS:
- 116, Signals and Indicators, subclasses 101+, for thermally responsive indicators generally.
- 169, Fire Extinguishers, subclasses 19+ and 63 for fire extinguishers suitable for motion picture devices.
- 340, Communications: Electrical, subclasses 584 and 577, for electrical indicating systems responsive to temperature or flames; and subclass 628 for such systems responsive to gas or smoke.
- 144** This subclass is indented under subclass 143. Subject matter including means to extinguish the combustion of a film by providing either a passageway for the film of such dimensions as to freely pass the motion picture film but to limit the amount of air to a level insufficient to support combustions or by providing a movable member which moves against the film under combustion condition.
- 145** This subclass is indented under subclass 144. Subject matter with means to cut the film strip if combustion occurs.
- SEE OR SEARCH CLASS:
- 83, Cutting, subclass 423 for combined sprocket fed material and cutting means without motion picture structure.
- 146** This subclass is indented under subclass 143. Subject matter with provision for reducing the temperature of the film strip in the projection gate.
- 147** This subclass is indented under subclass 146. Subject matter including means to control the temperature of the film said means being actuated by stopping the film strip advancing means.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 169, for projector drive means to advance the film strip an interval of one frame.
- 174+, for projector drive means with starting and or stopping means.
- 148** This subclass is indented under subclass 146. Subject matter in which the reduction in temperature is brought about by interposing filters which reduce the amount of the light of longer wave lengths in the projecting light beam.
- SEE OR SEARCH CLASS:
- 359, Optical: Systems and Elements, subclasses 350+ for filters which are operated in the infrared range.
- 149** This subclass is indented under subclass 143. Subject matter in which the means to prevent combustion of the film strip includes an opaque shutter or screen which is interposed between the projection light source and the film strip.
- 150** This subclass is indented under subclass 149. Subject matter including means to actuate the fire shutter upon sensing a variation in film tension from the normal tension of the film.
- 151** This subclass is indented under subclass 150. Subject matter where the sensing of the film tension includes means to detect a variation in size or position of the untensioned portion of the film strip.
- 152** This subclass is indented under subclass 149. Subject matter including means to actuate the fire shutter in response to the rate of travel of the motion picture film strip.
- 153** This subclass is indented under subclass 152. Subject matter in which the actuation of the fire shutter in response to the velocity of the film feed is through a frictional coupling driven by the film strip as it is advanced.
- 154** This subclass is indented under subclass 152. Subject matter in which the actuation of the fire shutter in response to the velocity of film feed is through a centrifugal coupling which is rotated by the film strip as it is advanced.

**155** This subclass is indented under subclass 143. Subject matter including means which operates an electrical switch in the motor or lamp circuit in a motion picture projector in response to a malfunction of the drive mechanism or to film breakage.

**156** This subclass is indented under the class definition. Subject matter employing a take up reel and a supply reel for a film strip carrier located coaxially.

- (1) Note. Generally the devices herein classified cause the film to be rotated laterally (i.e., twisted) for an odd number of 180 rotations to facilitate winding.

SEE OR SEARCH CLASS:

242, Winding, Tensioning, or Guiding, subclass 345.1 for coaxial coils in a magazine (cartridge), and subclass 356.1 for a particular drive for coaxial coils.

**157** This subclass is indented under the class definition. Subject matter including means to facilitate the insertion of a film strip in a motion picture device in a normal drive position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 10, for sound accompanied motion picture devices with plural sound transducers or transcription devices which are selected by threading different film paths.
- 203, for projectors with auxiliary light sources to illuminate the drive elements during the threading operation.
- 229+, for motion picture gates which are adjustable to an open position for film insertion or extraction.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclasses 91+ for sheet material threading devices generally.

**158** This subclass is indented under subclass 157. Subject matter including means to cause the film feeding mechanism, upon insertion of a free end of the film strip, to place the strip in a

normal drive position without further manual manipulation.

**159** This subclass is indented under the class definition. Subject matter including means to form a motion picture film strip into free standing loops upon actuation or upon loss of one of the loops through malfunction.

- (1) Note. A loop as included in this subclass constitutes a portion of the film strip placed in an untensioned manner between two drive elements which are relatively fixed, the portion of the film being longer than the straight line between the drive elements. This loop or buckled length of film minimizes drive variations from being transmitted by the film through tensional stresses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

29+, for sound motion picture devices employing loops between the picture gate and the sound head.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclass 36 for devices where the movement of the fed material is regulated by the adjustment or formation of a loop.

**160** This subclass is indented under the class definition. Subject matter including means to adjust the relative position of a film strip and the projection gate such that a frame of the motion picture is in registry with the gate, and/or means adjusting the shutter or other projector elements in connection with the adjustment of the strip carrier and projection gate for eliminating travel ghosts.

- (1) Note. The term travel ghosts refers to the projected picture which results from the shutter exposing the frame before the frame has come into registry which results in plural images of the frame being projected with a vertical displacement.

**161** This subclass is indented under subclass 160. Subject matter in which the relative adjustment of the film carrier is effected by altering the

length of the strip carrier between the supply source and the drive means such that the film gate is positioned adjacent a different portion of the film carrier.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

159, for motion picture apparatus with loop forming means.

**162** This subclass is indented under subclass 160. Subject matter in which the adjustment of the relative position of film strip and the gate is effected by moving the gate and film strip driving mechanism relative to one another.

**163** This subclass is indented under subclass 160. Subject matter including structure to advance or retard the rotation of the film driving sprocket.

**164** This subclass is indented under subclass 163. Subject matter including means to adjust the shutter registry simultaneously with the adjustment of the film drive sprocket.

**165** This subclass is indented under subclass 160. Subject matter including means to effect the correct synchronization of the shutter and the film strip carrier by advancing or retarding the registry of the rotary shutter.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

216, for shutters with adjustable apertures.

221, for shutters with an adjustable number of blades.

**166** This subclass is indented under the class definition. Subject matter including a source of motive power and/or means to couple the source to the driven elements such as the shutter or picture strip in the motion picture device.

(1) Note. The subject matter included in this and indented subclasses includes the source of motive power (e.g., spring or electric motors) and the driving connections to a specific motion picture element (e.g., an intermittent motion picture film drive) as well as the motor control devices which control the drive mechanism for specific motion picture applications. To be classified here there must be

a plurality of motion picture elements recited with cooperation between the elements or include structural details of a single element of specific motion picture application (e.g., a film gate).

SEE OR SEARCH THIS CLASS, SUB-CLASS:

12+, for apparatus to start one drive means in a predetermined relationship to the stopping of a second drive means used in sound accompaniment.

SEE OR SEARCH CLASS:

74, Machine Element or Mechanism, subclasses 640+ for gearing means to transmit motion from motors to a specific load.

185, Motors: Spring, Weight, or Animal Powered, subclasses 37+ for spring motors generally.

226, Advancing Material of Indeterminate Length, generally for the feed of material of indefinite length including motion picture film.

242, Winding, Tensioning, or Guiding, subclasses 349+ for a particular drive for unwinding and rewinding a machine convertible information carrier; e.g., an image film.

310, Electrical Generator or Motor Structure, subclasses 80+ for electric motors and associated gearing for motion conversion purposes.

318, Electricity: Motive Power Systems, subclasses 9+ for electric motor control systems and associated gearing driving a particular element.

**167** This subclass is indented under subclass 166. Subject matter including means to regulate the intensity of the projection light source in response to the speed of the film transport mechanism.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

152+, for auxiliary fire shutters to interrupt the light and being responsive to film transport speed.

198+, for projector light sources specifically adapted for motion picture projectors.

**168** This subclass is indented under subclass 166. Subject matter having more than one source of motive power, either contained within the device or substitutable for one another.

**169** This subclass is indented under subclass 166. Subject matter constructed to selectively interrupt the drive mechanism of the motion picture apparatus after a single cycle of operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

137, for motion picture cameras convertible to still camera by suitable rearrangement of parts.

**170** This subclass is indented under subclass 166. Subject matter including means to indicate to the operator of the camera or projector information pertaining to the operation of the drive mechanism, (e.g., motor spring tension, position of the shutter, etc.).

SEE OR SEARCH THIS CLASS, SUBCLASS:

23, for motion picture with sound accompaniment and including a synchronizing indicator.

**171** This subclass is indented under subclass 170. Subject matter wherein the indication appears in the view finder of the device.

SEE OR SEARCH CLASS:

396, Photography, subclass 296 for still cameras with a generic camera indicator visible in a view finder.

**172** This subclass is indented under subclass 170. Subject matter wherein the indicating means shows either the amount of film fed, or the amount remaining to be fed by the drive mechanism.

(1) Note. Signals indicating the exhausting of the film or beginning of the photo sensitive area of the film are not considered as footage indicators, but are classified in subclass 170 or subclass 171 above.

**173** This subclass is indented under subclass 166. Subject matter in which means are provided to cause the film strip to be advanced in a direc-

tion opposite to its normal direction. Such that the motion sequence comprises pictures representing time intervals with reverse relationship to the actual action sequence.

SEE OR SEARCH THIS CLASS, SUBCLASS:

91, for mechanisms to reverse the direction of film movement during the production of transitional exposure techniques.

124, for mechanisms to rewind the film after projection or exposure.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclasses 49+ for the devices to reverse selectively the direction of film feed.

242, Winding, Tensioning, or Guiding, subclasses 324+, particularly subclasses 325.1 and 333+ for a reversible drive for unwinding and rewinding a machine convertible information carrier; e.g., an image film.

**174** This subclass is indented under subclass 166. Subject matter including means to start and stop the operation of the drive mechanism as by starting or stopping the motive power source, connecting or disconnecting a coupling means, or engaging or disengaging a driven element.

SEE OR SEARCH CLASS:

242, Winding, Tensioning, or Guiding, subclasses 324+ for means for unwinding and rewinding a machine convertible information carrier, particularly subclasses 333+ for a particular automated stop or reversal device and subclass 357 for a detector or indicator.

**175** This subclass is indented under subclass 174. Subject matter which includes means to limit the duration of the run of the drive mechanism to advance a predetermined amount of film or operate for a predetermined length of time.

- SEE OR SEARCH CLASS:  
242, Winding, Tensioning, or Guiding, subclasses 324+ for means for unwinding and rewinding a machine convertible information carrier, particularly subclasses 333+ for a particular automated stop or reversal device and subclass 357 for a detector or indicator.
- 176** This subclass is indented under subclass 174. Subject matter including means to operate the starting or stopping means in response to a predetermined condition (e.g., position, speed, etc.) of other elements of the camera or projector.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
143+, for fire prevention devices which stop the operation of a motion picture projector in response to film position or speed to prevent fire.
- 177** This subclass is indented under subclass 176. Subject matter in which the element effecting operation of the starting or stopping means is responsive to the shutter.
- 178** This subclass is indented under subclass 174. Subject matter wherein the starting and/or stopping means is operated by manual manipulation of a control element.
- 179** This subclass is indented under subclass 178. Subject matter wherein the manual control element is located remotely from the motion picture device.
- 180** This subclass is indented under subclass 166. Subject matter including means to prevent variations in the speed of operation of the drive mechanism or to regulate to a predetermined speed of operation of the mechanism.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
21, for motion pictures with sound synchronizing by speed regulation.
- 181** This subclass is indented under subclass 180. Subject matter in which the regulation or selection means includes an oscillating mechanical stop means.
- 182** This subclass is indented under subclass 180. Subject matter in which the regulation or selection means includes a member frictionally engaging a driven element to slow the speed of said driven element.
- 183** This subclass is indented under subclass 166. Subject matter including at least one driven, endless, flexible member which engages the film strip to provide for movement of the strip.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
97, for motion picture apparatus employing two film strips which are fed in superimposed position.
- SEE OR SEARCH CLASS:  
226, Advancing Material of Indeterminate Length, subclasses 74+ and 117 for flexible belt moving means of general application.
- 184** This subclass is indented under subclass 166. Subject matter including means to advance the film strip continuously together with means to periodically stop the film strip.
- (1) Note. Classified here are motion picture mechanisms in which the means to stop the film includes a fixed stop means which cooperates with the drive in such a manner that a buckle of film is formed between the advancing means and the stop, the resilient collapse of the buckle serving to advance the film strip.
- SEE OR SEARCH CLASS:  
226, Advancing Material of Indeterminate Length, subclasses 39 and 121 for general purpose feeding apparatus which regulates material by contacting the fed material.
- 185** This subclass is indented under subclass 166. Subject matter including an oscillating means to periodically engage and lengthen a loop of

film strip which is otherwise being continuously shortened by other drive means.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclasses 113+ for plural material moving means generally including a bight former.

- 186** This subclass is indented under subclass 166. Subject matter in which a continuously driven sprocket is mounted for reciprocating movement such that the reciprocating motion just cancels the driving motion in one direction of reciprocation and adds to the sprocket motion in the other direction so as to produce an intermittent motion of the driven film.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclasses 76+ for material advancing structure generally including a rotating sprocket engaging modifications in the material.

- 187** This subclass is indented under subclass 166. Subject matter in which the power source drives the motion picture film through an intermittently rotated toothed drum or disc which engages perforations in the film strip.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclasses 76+ for material advancing structure including a rotating sprocket engaging modifications in the material.

- 188** This subclass is indented under subclass 187. Subject matter in which the sprocket is driven by means of a rotating element with a groove corresponding to periods of sprocket rotation and dwell, and a cooperating following element.

- 189** This subclass is indented under subclass 187. Subject matter in which the sprocket is advanced by means of a gear pair including one member with radial slots jointed by arcuate portions and a second member including a peg member which cooperates with the radial slots to drive the first member intermittently upon rotation of the said second member and further comprising a curved portion which cooperates

with the said arcuate portions of the said first member to index said first member against rotation when not engaged by said peg member.

SEE OR SEARCH CLASS:

74, Machine Element or Mechanism, subclass 436 for Geneva mechanisms, per se.

226, Advancing Material of Indeterminate Length, subclasses 76+ for material advancing sprocket mechanisms of general application.

- 190** This subclass is indented under subclass 187. Subject matter where the driving means includes a special gear pair which because of an irregular shape or toothing arrangement drives the sprocket in a nonuniform fashion with a uniform rotation of one of the gears of said pair.

- 191** This subclass is indented under subclass 166. Subject matter including a reciprocating member, a projection on said member to engage longitudinally spaced perforations in a motion picture film, and means to withdraw the projection from the film on alternate carrier strokes to effect an intermittent advance.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclasses 62+ for material advancing structure generally involving feed claws which engage perforations in the advanced material.

- 192** This subclass is indented under subclass 191. Subject matter where the reciprocating member with the film engaging projection is actuated by an eccentric crank pin which is journaled in the reciprocating member.

- (1) Note. The crank pin drives as classified here have a driving connection which is not displaced relative to either the carrier or the driving member. Film engaging claws which are driven with an eccentric member with relative displacement between the claw and eccentric member are considered cams and are classified in subclasses 194+.

- 193** This subclass is indented under subclass 192. Subject matter including a guide to determine the path of reciprocation of the member with the film engaging projection, the guide comprising a pivoted link or fixed slot which cooperates with a slot engaging follower.
- 194** This subclass is indented under subclass 191. Subject matter in which the driving means for the member with the film engaging projection includes a cam and cam follower.
- 195** This subclass is indented under subclass 194. Subject matter in which the claw driving cam has a claw controlling cam contour in the form of a groove, generally of uniform depth, lying in one side of the cam which is at right angles to the axis of rotation of the cam.
- 196** This subclass is indented under subclass 194. Subject matter which includes a single fixed pivot which together with the cam determines the path of reciprocation of the film engaging projection carrier.
- 197** This subclass is indented under subclass 166. Subject matter including support means as defined in subclass 243 below for the motion picture apparatus which cooperates with the drive mechanism.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 34+, for supports including sound motion picture structure.  
 132, for motion picture apparatus supported by a vehicle as there defined.  
 243, for supports generally combined with significant motion picture structure.
- SEE OR SEARCH CLASS:  
 248, Supports, for support structure generally, and especially subclass 637, for projection machine supports.
- 198** This subclass is indented under the class definition. Subject matter including means to provide or regulate the illumination in motion picture projectors.
- (1) Note. The projection light sources as here classified include a light source together with some motion picture structure such as a gate or shutter. Class 362, Illumination, provides for illumination generally.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 28, for sound motion picture apparatus where the same light source is employed for the projection of the picture as well as for the sound transducer.  
 134, for plural motion picture projectors with a single light source.  
 167, for motion picture projection apparatus with means to effect a control of the intensity of the projection light source in response to the drive speed.
- 199** This subclass is indented under subclass 198. Subject matter wherein there is a specific relationship between the projection light source and the motion picture shutter, such as the illuminating source being excited by an electric signal synchronized with the rotation of the shutter.
- 200** This subclass is indented under subclass 198. Subject matter in which the light source is cyclically extinguished to effect an intermittent projection.
- SEE OR SEARCH CLASS:  
 315, Electric Lamp and Discharge Devices: Systems, especially subclasses 209+, for lamps with interrupted power supply.
- 201** This subclass is indented under subclass 198. Subject matter including means to project a light on the screen during frame change or to provide a border around the projected picture so as to minimize the differences in screen illumination during periods of projection and picture change.
- (1) Note. The light projected on the screen during frame change by the devices herein classified bears no image.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 68, for motion picture projectors which project a picture from a separate film

- during the frame change of the first film.
- 134, for plural projectors with a single light source.
- SEE OR SEARCH CLASS:
- 472, Amusement Devices, particularly subclass 61 for special stage lighting operated other than by a projector.
- 202** This subclass is indented under subclass 198. Subject matter in which means are provided to cool the light source by means of a directed flow of air.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 211, for shutters which serve to cool the film as well as interrupt the light.
- SEE OR SEARCH CLASS:
- 362, Illumination, subclass 294, for structure for projector light sources with ventilation and cooling where no significant motion picture structure is claimed.
- 203** This subclass is indented under subclass 198. Subject matter including an additional light source distinct from the projection light source to illuminate the projecting apparatus or portions thereof to facilitate, for example, threading the film.
- 204** This subclass is indented under the class definition. Subject matter including means to cyclically interrupt the light from the illuminator in the projector or to the sensitized carrier in the camera.
- (1) Note. The light interruption is generally timed so as to occur during the movement of the picture carrier; although in projectors there are frequently light interruptions of integrally higher rate than the carrier movement rate to reduce flicker.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 76, for removable magazine type cameras with shutter type light traps.
- 149, for motion picture apparatus with auxiliary fire shutters.
- 164, for framing and/or travel ghost elimination with shutter synchronization; and subclass 165, for framing or ghost elimination structure involving shutter adjustment.
- 177, for drive mechanisms with shutter operated starting and/or stopping.
- 198, for projection light sources synchronized with the shutter.
- SEE OR SEARCH CLASS:
- 359, Optical: Systems and Elements, subclasses 227+ and 238+ for light valves generally.
- 396, Photography, subclasses 452+ for camera shutters.
- 205** This subclass is indented under subclass 204. Subject matter including a plurality of light paths and wherein the shutter interrupts the light passage along the plurality of light paths.
- 206** This subclass is indented under subclass 205. Subject matter in which one of the light paths is employed as a view finder.
- 207** This subclass is indented under subclass 204. Subject matter in which the shutter moves in a rectilinear direction across the light path.
- SEE OR SEARCH CLASS:
- 396, Photography, subclasses 483+ for sliding shutters used in still photography.
- 208** This subclass is indented under subclass 204. Subject matter in which the light interrupting means moves in an arcuate direction across the light path about a fixed axis in either a continuous or an oscillatory fashion.
- 209** This subclass is indented under subclass 208. Subject matter in which the light transmitting portion of the shutter is adjusted in size in accordance with the speed of the shutter rotation.
- (1) Note. The shutters of this subclass generally are so constructed as to vary the shutter aperture to keep the exposure of a light sensitive carrier constant despite variations in the drive speed.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 152+, for shutters which close or stop in a closed position in response to a slow shaft speed for the purpose of fire prevention.
- 216, for shutters with manual adjustment of aperture.
- 210** This subclass is indented under subclass 208. Subject matter in which the light interrupting areas of the shutter include openings or blades have particular edge configurations which are adapted to interrupt the light in accordance with the particular blade construction at a rate different from an opaque sector blade.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 212+, for shutters which intercept the light at a radial shutter rate but which modify the light beam as to intensity or some other optical parameter.
- 211** This subclass is indented under subclass 208. Subject matter in which the light interrupting means includes means causing a flow of air.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 202, for projection light sources with ventilation and cooling.  
 212+, for ventilation in motion picture apparatus for film cooling.
- SEE OR SEARCH CLASS:  
 362, Illumination, subclass 294 for cooling and ventilating systems in projectors generally.
- 212** This subclass is indented under subclass 208. Subject matter in which the shutter includes means to alter the light rather than, or in addition, to completely block the passage of the light.
- SEE OR SEARCH CLASS:  
 355, Photocopying, subclasses 125+ for vignettters, per se, and adapted for use in photographic contact printing.  
 359, Optical: Systems and Elements, subclasses 885+ for optical filters.
- 396, Photography, subclass 545 for vignettters used with still cameras.
- 399, Electrophotography, subclasses 9+ for diagnostics, subclasses 38+ for controls, and subclasses 177+ for exposure.
- 213** This subclass is indented under subclass 212. Subject matter in which the light modifying blades include means to alter the color content of the light.
- (1) Note. These shutters are usually used in color cameras or projectors using monochrome film.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 42, for exhibiting methods with color filtration.  
 66+, for color cameras and/or projectors using monochrome film.
- 214** This subclass is indented under subclass 208. Subject matter in which the shutter includes a plurality of blades normally rotating about, but spaced along a common axis, each spaced blade or blade groups having a separate drive.
- (1) Note. The shutters classified here have plural blades which normally move relative to each other, or due to their optical positioning have an effective relative motion. If such plural blades are clamped together contiguously and have no relative motion, they are classified in subclasses 208+ above or in subclasses 219+ below.
- 215** This subclass is indented under subclass 214. Subject matter in which the light interrupting blades move in opposite directions.
- 216** This subclass is indented under subclass 214. Subject matter which includes means to adjust the relative position of the blades while the shutter is in operation so as to alter the size of the light passing aperture.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 141, for devices which control the shutter aperture in response to variations in exposure parameters.

- 209, for rotary shutters whose aperture size is speed adjusted.
- SEE OR SEARCH CLASS:  
396, Photography, subclasses 213+ for devices which adjust photographic shutters in response to variation of exposure parameters.
- 217** This subclass is indented under subclass 216. Subject matter in which the aperture adjustment means is controlled by a power driven means operated by the drive of the motion picture mechanism so as to effect the adjustment at a predetermined rate relative to the position of the motion picture carrier.
- (1) Note. In this subclass the aperture size is varied with time while in subclass 209 above the aperture size is varied with the shutter velocity.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
91, for similar exposure or projection effects which are caused by apparatus which is auxiliary to the motion picture device.
- 218** This subclass is indented under subclass 208. Subject matter which includes a plurality of blades which rotate about separate spaced axis.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
214, for a shutter including a plurality of rotating blades spaced along the same axis.
- 219** This subclass is indented under subclass 208. Subject matter wherein the blades form a unitary structure at right angles to the axis of rotation.
- (1) Note. The light interrupting means is considered a unitary structure if its component parts are relatively fixed in operation and have a common drive. Subclass 214 above provides for axially spaced independently driven blade.
- 220** This subclass is indented under subclass 219. Subject matter in which the number of blades may be changed, as by adding or removing blades or superimposing blades to effectively reduce the number.
- 221** This subclass is indented under the class definition. Subject matter including structure in the optical path which positions the motion picture carrier, usually a film strip, in the focal plane of the optical means, and masks the carrier edges such that a single picture area (i.e., a frame) is presented to the optical path.
- (1) Note. Usually the gate includes an apertured or aperture plate for framing which has one surface conjugate to the focal plane and a pressure exerting plate usually for positioning the carrier, in relation to said surface.
- (2) Note. This subclass 221 includes all gates for carriers other than the film strips as well as film strip gates not provided for below. The indented subclasses below are limited to gates for film strip picture carriers.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
27+, for sound accompanied motion picture apparatus with film gates which have provisions for sound transducers.
- SEE OR SEARCH CLASS:  
353, Optics: Image Projectors, subclasses 23, 24, 95, and 96 for an image projector having a film gate.
- 222** This subclass is indented under subclass 221. Subject matter wherein the motion picture film is maintained in position against the gate by a liquid or gas.
- 223** This subclass is indented under subclass 221. Subject matter in which the positioning means includes rollers which contact the motion picture film strip.
- 224** This subclass is indented under subclass 221. Subject matter including structure cooperating with the marginal portions of the motion picture film strip for maintaining the strip in proper lateral position in the gate.

## SEE OR SEARCH CLASS:

242, Winding, Tensioning, or Guiding, subclass 548.2 for a guide that directs an edge of an elongated material during convolute winding and subclass 615.3 for a guide that directs running material by confining a portion of the moving material.

**225** This subclass is indented under subclass 221. Subject matter including a pressure plate which is cyclically moved in relation to the aperture plate so as to exert an intermittent pressure upon the motion picture film.

**226** This subclass is indented under subclass 221. Subject matter in which the aperture plate is removably mounted in the remaining film gate structure.

## SEE OR SEARCH THIS CLASS, SUB-CLASS:

79+, for apparatus employing changeable aperture plates such that picture carriers with different size frames may be accommodated.

130, for apparatus employing aperture plates replaceable with cleaning means to clean the motion picture film.

**227** This subclass is indented under subclass 221. Subject matter in which means are provided to adjust the pressure applied to the motion picture film by the pressure plate.

**228** This subclass is indented under subclass 221. Subject matter in which the gate includes motion picture film positioning structure constraining the film to a curved plane corresponding to the curved focal plane of the lens.

**229** This subclass is indented under subclass 221. Subject matter where structure is provided such as handles and/or means for facilitating the movement of the gate from operative to or from inoperative position, or wherein structure is provided such as a latch for securing the gate in one or both of these positions.

## SEE OR SEARCH THIS CLASS, SUB-CLASS:

178, for manual controls for both the gate and the drive mechanism.

**230** This subclass is indented under subclass 229. Subject matter wherein the gate moving and/or holding structure includes an element actuated by the operation of the closure of the motion picture camera or projector housing.

**231** This subclass is indented under subclass 221. Subject matter including a lens mounting in combination with the gate; the gate supporting or being supported by the lens mounting, or the gate and lens mounting being integral.

## SEE OR SEARCH CLASS:

359, Optical: Systems and Elements, subclasses 819+ for lens mountings generally.

**232** This subclass is indented under the class definition. Subject matter including the structure or medium on which the series of pictures are recorded in the cooperating apparatus (e.g., camera) for later observation or reproduction with cooperating apparatus (e.g., projector).

(1) Note. The subject matter here is usually separate and distinct from the recording and projecting apparatus, but requires such apparatus for the recording and reproducing of the scene. Where the carrier and recording and/or reproducing apparatus are inseparable or claimed, classification is usually in one of the above subclasses directed to particular types of motion picture equipment, e.g., subclasses 98+ and 101.

(2) Note. The subject matter of this subclass (232) includes some structural limitation adapting the carrier to motion picture cameras and projectors, as opposed to mere chemical limitations in such carriers, which are classified in the Radiation Imagery Chemistry search class note below.

## SEE OR SEARCH THIS CLASS, SUB-CLASS:

37, for picture and sound carriers.

- 56, for methods of treating or working film strip.
- 98+, for individual picture plate devices. See also (1) Note above.
- 130, for motion picture apparatus with film treating or working structure.

## SEE OR SEARCH CLASS:

- 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, appropriate subclasses for chemically defined motion picture carriers and processes involving same.

**233** This subclass is indented under subclass 232. Subject matter wherein the carrier is formed as a tape or strip with individual elements of a motion picture sequence uniformly spaced along the strip.

- (1) Note. Usually uniformly spaced apertures are provided for cooperating with the sprocket or claw.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 37, for strip type films with a sound record.
- 56, for methods of treating or working film strip.
- 59, for stereoscopic apparatus involving plural film strips.
- 166+, for drive mechanisms for film strips.

## SEE OR SEARCH CLASS:

- 353, Optics: Image Projectors, subclass 120 for picture carriers for still projectors.

**234** This subclass is indented under subclass 233. Subject matter wherein the strip carries a series of pictures either in color or monochrome, which produce with suitable cooperating apparatus a color picture.

- (1) Note. For classification here as opposed to the Radiation Imagery Chemistry: Process, Composition, or Product Thereof, class, some structural detail is recited in the claims, or the pictures are arranged in a particular format, or in motion picture sequence. A film carrying a mere series of colored pictures not in

motion picture sequence is classified in Radiation Imagery Chemistry: Process, Composition, or Product Thereof,. Mere coloring of the film to produce a particular tint is not classified here; but in subclass 233 above if structural limitations are present or Radiation Imagery Chemistry: Process, Composition, or Product Thereof,, if the structural details of the film strip are absent. Where the film is colored for the purposes of combining colors to produce noncolored effects such as stereoscopic, classification is not here, but in subclass 239 or subclass 240 below.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 40+, and 44+, for methods of color cinematography with monochrome film.
- 66+, for color motion picture apparatus using monochrome film.

## SEE OR SEARCH CLASS:

- 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, appropriate subclasses for chemical natural color techniques (see (1) Note above).

**235** This subclass is indented under subclass 233. Subject matter with a strip of nonpicture bearing material on the end of the picture bearing film used in threading the film strip through the apparatus.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 129+, for motion picture apparatus including structure to thread the leader through the apparatus.

## SEE OR SEARCH CLASS:

- 226, Advancing Material of Indeterminate Length, subclasses 91+, for threading devices of general application.

**236** This subclass is indented under subclass 233. Subject matter including a marking carried upon the film strip other than that pictorially recorded on the film strip and used as indicia to convey intelligence.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 90, for tilting devices which place titles on the film strip.  
 92, for motion picture apparatus responsive to film carrier control signals.
- 237** This subclass is indented under subclass 233. Subject matter including structure such as thickened areas or metallic strips at particular parts of the carrier for strengthening the carrier at these parts.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 238, for abrasion resistant picture carriers.
- 238** This subclass is indented under subclass 233. Subject matter including structure such as an embossing or coating to protect the carrier against damage caused by the handling by the recording or reproducing apparatus.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 237, for reinforced picture carriers.
- 239** This subclass is indented under subclass 233. Subject matter wherein the picture frames have a particular shape or arrangement.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 37, for picture and sound record carriers.  
 234, for frames having a particular arrangement for color effects.  
 240, for particular picture arrangements within the frame as opposed to the arrangement of a plurality of frames as in this subclass 239.
- 240** This subclass is indented under subclass 233. Subject matter including some significant subject matter or arrangement of subject matter recorded within the picture frame of the carrier (i.e., some subject matter or picture arrangement other than the conventional series of pictures), each being slightly changed with respect to the next to contribute to the illusion of motion.
- (1) Note. Examples of subject matter here classified are stereoscopic images;
- images of different focus, printed titles, etc.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 85+, for apparatus for producing special effects, as opposed to the mere carrier of such effects as classified in this subclass 240 which cooperates with the other apparatus; and especially subclass 90, for tilting apparatus.  
 236, for film carrier indicators.
- SEE OR SEARCH CLASS:  
 283, Printed Matter, for printed matter not elsewhere classifiable.
- 241** This subclass is indented under subclass 233. Subject matter wherein the apertures or depressions cooperating with the advancing means (such as the claw or sprocket) are arranged in a particular manner.
- (1) Note. For classification here (as opposed to Class 226, Advancing Material of Indeterminate Length) the recited apertures or depressions are related only to each other or to the film strip, per se; claims to the combination drive means plus the film with particular driving apertures are classified in Class 226, subclasses 52+.
- 242** This subclass is indented under the class definition. Subject matter including structure substantially enclosing and cooperating with significant structure of the motion picture camera and/or projector.
- (1) Note. For classification in this motion picture class some details of the motion picture apparatus or detailed relationship between the apparatus and cabinet must be claimed. Class 312, Supports: Cabinet Structure, especially subclass 10.1 provides for motion picture cabinets where no details of the motion picture apparatus or relationship between the motion picture apparatus and cabinet are claimed.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 34+, for housings with sound motion picture apparatus.
- 72+, for removable film strip magazine type motion picture apparatus.
- 104, for housings including viewing screens for cooperation with the housed motion picture apparatus, i.e., cabinet type projectors.
- 143+, for motion picture apparatus housings particularly adapted for the prevention of fire damage.

SEE OR SEARCH CLASS:

- 312, Supports: Cabinet Structure, subclass 10.1 for cabinets designed to house motion picture apparatus but with no specific motion picture apparatus cooperating with the housing being recited. See also (1) Note above.

**243** This subclass is indented under the class definition. Subject matter including structure for maintaining the motion picture apparatus in the fixed position or fixed path of movement (i.e., adjustable) with respect to some other body or the earth; or including structure facilitating the grasping of the apparatus for hand held transportation or operation.

- (1) Note. Class 248, Supports, especially subclasses 183 and 637 provides for motion picture camera or projector supports where no significant motion picture structure is claimed. The mere positive inclusion in the claim of "a motion picture projector," or equivalent terminology is not sufficient to preclude classification in Class 248. As between Classes 353, Optics: Image Projectors and 396, Photography for this class the positive recitation in the claim of "a motion picture projector" or "a motion picture camera" or the equivalent terminology is sufficient for classification in this motion picture class.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 34+, for sound motion picture apparatus together with supports.

- 85+, for apparatus producing special motion picture effects which may include a support.

- 131+, for motion picture apparatus supporting or supported by a diverse type device.

- 176, for motion picture apparatus wherein the control therefor is incorporated in or passes through the support.

- 197, for motion picture apparatus including a support wherein a drive means for the motion picture apparatus is incorporated in or transmits its energy through the support.

- 232+, for motion picture carriers.

- 242+, for motion picture apparatus with housings.

SEE OR SEARCH CLASS:

- 242, Winding, Tensioning, or Guiding, subclasses 358 and 358.1 for a particular frame or frame attachment in a machine for unwinding and rewinding a machine convertible information carrier and subclass 539 for a particular frame in a convolute winding machine.

- 248, Supports, especially subclasses 183.1+ and 637 for motion picture apparatus supports. See also (1) Note above.

- 348, Television, subclasses 373+ for television apparatus which may involve cameras with supports.

- 353, Optics: Image Projectors, for a still picture projector which may have a support. See (1) Note above.

- 396, Photography, subclasses 419+ for a still camera combined with a support.

**244** This subclass is indented under the class definition. Subject matter which is not provided for in any of the preceding subclasses of this class.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 38+, for miscellaneous methods of producing or applying motion pictures.

END